

App. No. 10/522,045
Office Action Dated April 2, 2007

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REMARKS

Favorable reconsideration is respectfully requested in view of the above amendments and following remarks. Claims 1, 4-7, 14 and 16 have been amended. The limitation in claim 1 concerning the step of pouring the liquid sample into the centrifugation tube is supported by, for example, previous claim 3 and page 5, lines 17-22. The limitation in claim 1 concerning the step of pouring the collecting solution into the centrifugation tube is supported by, for example, previous claim 3 and page 5, lines 22-24. The limitation in claim 1 concerning the step of centrifuging the centrifugation tube is supported by, for example, previous claim 3 and page 5, lines 24-26. Claims 4-7, 14 and 16 have been amended editorially. Claims 2, 3 and 13 have been canceled without prejudice or disclaimer. No new matter has been added. Claims 1, 4-12 and 14-25 are pending.

Claim rejections - 35 U.S.C. § 112

Claims 2-4, 6 and 14-25 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to claim the subject matter of the present invention. Claims 1, 4, 6, 14 and 16 have been amended, taking the issues noted in the rejection into account. Applicants submit that claims 4, 6 and 14-25 are definite.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections - 35 USC §102

Claims 1, 5, 7 and 10 have been rejected under 35 U.S.C. §102(b) as being anticipated by Wardlaw (US 2001/0033808). The rejection is rendered moot, as the language in previous claims 2 and 3, which were not rejected, is now incorporated in claim 1. Claims 5, 7 and 10 further limit and depend from claim 1. Applicants do not concede the correctness of the rejection.

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Withdrawal of the rejection is respectfully requested.

Claim rejections - 35 U.S.C. § 103

Claims 2-4 and 6 have been rejected under 35 U.S.C. 103(a) as obvious over Wardlaw in view of Tsuru et al. (U.S. Patent No. 5,085,781) and further in view of Pathak (US 2002/0114775). Applicants respectfully traverse this rejection.

Claim 1 utilizes a centrifugation tube comprising a filter that divides an inner space of the tube into an upper part and a lower part, and water-absorbing particles disposed on the filter. Claim 1 requires the step of pouring the liquid sample into the centrifugation tube to bring the liquid sample into contact with the water-absorbing resin particles so that a liquid phase part of the liquid sample is absorbed by the water-absorbing resin particles and the microorganism or the cell is caught on a surface of the water-absorbing resin particles, pouring a collecting solution into the centrifugation tube to bring the collecting solution into contact with the water-absorbing particles so as to collect the microorganism or the cell caught on the surface of the water-absorbing resin particles in the collecting solution, and then centrifuging the centrifugation tube so that the collecting solution passes through the filter to move toward a bottom of the centrifugation tube. Advantageously, the method required by claim 1 allows efficient collection of bacteria or the like from a large amount of sample.

The rejection relies on Tsuru and Pathak for a centrifugation tube comprising a filter that divides an inner space of the tube into an upper part and a lower part, and water-absorbing particles disposed on the filter. The rejection's reliance on the references is misplaced. Tsuru teaches applying a gravity-flow method using a syringe-type column, as opposed to applying a centrifugation method using a centrifugation tube, to wash off and recover nonadsorptive cells from the column. On the other hand, claim 1 requires collecting the microorganism or the cell

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caught on the surface of the water-absorbing resin particles using a collecting solution by separating the collection solution and water-absorbing resin particles by centrifugation.

Moreover, although Pathak teaches the use of hydrogel beads, the reference in no way cures the deficiencies of Tsuru, as Pathak fails to teach or suggest hydrogel beads that adsorb microorganisms or cells.

The rejection notes that using filtration combined with centrifugation methods when attempting to recover a given substance by means of elution was routinely used in the art at the time of the invention as demonstrated by Tsuru. While Tsuru discloses conventional centrifugation methods for accomplishing separation based on the density and size differences in a mixture of components, the reference in no way teaches or suggests applying a centrifugation step when attempting to recover a given substance using water-absorbing resin particles. Accordingly, claims 1, 4 and 6 are patentable over the references, taken together or separately.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claims 8-9 and 14-25 have been rejected under 35 U.S.C. 103(a) as obvious over Wardlaw in view of Britschgi et al. (U.S. Patent No. 5,726,021). The rejection is rendered moot, as the language in previous claims 2 and 3, which were not rejected, is now incorporated in claim 1. Claims 8-9 and 14-25 further limit and depend from claim 1. Applicants do not concede the correctness of the rejection.

Withdrawal of the rejection is respectfully requested.

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In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions or concerns regarding this communication can be directed to the attorney-of-record, Douglas P. Mueller, Reg. No. 30,300, at (612) 455.3804.

Respectfully submitted,

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Dated: July 2, 2007

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